

What is claimed is:

1 1. A shaftless cooling fan, comprised of a fan body having a configured shaft
2 rotatably jointed to a fan base, said shaft being extended radially to form a
3 plurality of fan leaves, said fan base being a square hollow casing having at least
4 an opening penetrating the casing itself in its top end and lateral wall, and an
5 electrical device for driving said fan body, in which:

6 a recess for positioning a shaft end is formed at respective corresponding
7 positions of the lower surface of a top end and the upper surface of a bottom end
8 in said fan base; the electrical device is extended to the upper surface of the
9 bottom end of the fan base to form a plurality of electromagnets, which is
10 aligned surrounding said recess in the upper surface of the bottom end of said
11 fan base;

12 said shaft having a plurality of permanent magnets in its bottom face is
13 tapered at both ends for mating with the recesses of said fan base so that each
14 shaft end can be rotatably fitted in each recess; and

15 a magnetic N-zone, an S-zone, and a Neutral zone are arranged repeatedly
16 and rotationally in every permanent magnet, and the magnetic zones of each
17 electromagnet are controlled correspondingly to that of each said permanent
18 magnet.

1 2. The shaftless cooling fan according to claim 1, in which each shaft end is
2 substantially point-contacted with each recess.